

Customer No.: 31561
Application No.: 10065,566
Docket No.: 9747-US-PA

REMARKS

Present Status of the Application

The Office Action rejected pending claims 1-20. The paragraphs [0015] and [0022] are objected due to typing error. The drawings are objected to under 37 CFR 183(a). In addition, claims 1-5, 7-8, 10, 12-16 and 18-20 are rejected under 35 U.S.C. §102(e) as being anticipated by Sekiya (US Patent No.6,583,775). Moreover, claim 11 is rejected under 35 USC §103(a) as being unpatentable over Sekiya in view of Hack (US Application No. 2002/0030647). Furthermore, claims 6, 9 and 17 are rejected under 35 USC §103(a) as being unpatentable over Sekiya in view of Filliman (US Patent No.5,255,220). Reconsideration and allowance of those claims is respectfully requested.

Discussion of Office Action

Response to Objections of Specification and Drawings

In response thereto, Applicants would like to thank the Examiner for pointing out the errors in paragraphs [0015], [0022] and the drawings. Accordingly, paragraphs [0015], [0022] and [0034] are amended due to typing error.

In addition, the Office Action states that "the discharging unit is coupled to a ground potential" and "the discharging unit is coupled to a negative voltage" are not shown in the

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drawings. However, it is noted that these features have been disclosed at least in the highlighted description in amended paragraph [0034] listed below:

[0034] The aforementioned discharging unit 315 discharges the light-emitting device 320 to the ground. In another embodiment, the discharging unit 315 may connect to a negative voltage terminal to increase discharge efficiency. For example, the drain terminal of the third thin film transistor (TFT3) may be connected to a voltage source Vdrv at a ground potential or a negative voltage. If the drain terminal is connected to a negative voltage, discharging rate from the light-emitting device will increase and working life of the display may increase.

Moreover, the Office Action states that "the light-emitting device includes a molecular light-emitting diode" are not shown in the drawings. However, it is noted that the "molecular light-emitting diode" only represents a type of "light-emitting diode" constructed by "molecular type" materials.

It is believed that the foregoing amendments add no new matter to the present application. Applicants believe that these amendments place the claims in condition for allowance. Reconsideration and allowance of the application and presently pending claims are respectfully requested.

Response to Claims Rejections under 35 USC § 102

Claims 1-5, 7-8, 10, 12-16 and 18-20 are rejected under 35 USC §102(e) as being anticipated by Sekiya.

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For a proper rejection of a claim under 35 U.S.C. section 102, the cited reference must disclose all elements/features/steps of the claim.

Independent claim 1 states:

Claim 1. A driving circuit for a display device having a plurality of pixels, wherein the driving circuit is used for driving the light-emitting device in each pixel, the driving circuit comprising:

a light-emitting device driving unit coupled to the light-emitting device for providing a driving current to the light-emitting device selectively; and

a discharging unit coupled to the light-emitting device driving unit for discharging the light-emitting device according to the voltage level of a control signal as soon as the light-emitting device driving unit provides a driving current to the light-emitting device.

(Emphasis Added)

Independent claim 1 states:

Claim 12. A display device having a plurality of pixels, wherein each pixel has a driving circuit for driving the light-emitting device inside each pixel, the driving circuit comprising:

a light-emitting device driving unit coupled to the light-emitting device for providing a driving current to the light-emitting device selectively; and

a discharging unit coupled to the light-emitting device driving unit for discharging the light-emitting device according to the voltage level of a control signal as soon as the light-emitting device driving unit provides a driving current to the light-emitting device.

(Emphasis Added)

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Independent claims 1 and 12 are allowable for at least that Sekiya does not disclose, teach or suggest the feature that “a discharging unit coupled to the light-emitting device driving unit for discharging the light-emitting device” as highlighted above.

For example but not limited to, referring to FIG. 3 and lines 5-7, paragraph [0032] of the specification, it is disclosed that:

“Using the sequential scan line switching property of the driving circuit, the discharging unit 315 will discharge the light-emitting device 320 immediately after receiving an activation signal”

(Emphasis Added)

However, referring to FIGS. 1 and col. 11, lines 29-33 of Sekiya, it is disclosed that:

“When a third thin film transistor TFT3 is placed into an on state with the control signal, the corresponding holding capacitor Cs discharges and the gate-source voltage Vgs of the second thin film transistor TFT2 becomes 0V. Consequently, the current to flow to the light emitting element OLED is cut off.”

(Emphasis Added)

Comparing the application and Sekiya, it should be noted that, the feature that “a discharging unit for discharging the light-emitting device” is not disclosed, taught or suggested by Sekiya since the TFT3 of Sekiya discharges the capacitor Cs (not the light-emitting device) and finally “to cut off the current to flow to the light emitting element OLED.” It should be noted that, in the application, “to discharge the light-emitting device” means to remove

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the electric charges out of the "light-emitting device." For example but not limited to, the electric charges may be discharged from the light-emitting device to the ground (as disclosed in claim 5 of the specification) or to the negative voltage terminal (as disclosed in claim 6 of the specification). However, in Sekiya, "to cut off the current to flow to the light emitting element" means to prevent the current from flowing to the light emitting element." Accordingly, the applicants can't find that Sekiya has disclosed, taught or suggested that "to discharge the light-emitting device" as disclosed in the present application.

The Office Action states that claim 5 is rejected since TFT3 of Sekiya shown in FIG. 1 is connected to ground. However, as disclosed in col. 11, lines 29-33 of Sekiya, when TFT3 is turned on (the drain of TFT3 is connected to the source of TFT3 and thus grounded), the capacitor Cs discharges and the gate-source voltage Vgs of the second thin film transistor TFT2 becomes 0V. Finally, just the current to flow to the light emitting element OLED is cut off." As described above, "TFT3 is connected to ground" does not mean to "discharge the light-emitting device."

The Office Action states that claim 6 is rejected by FIG. 3 and col. 6, lines 21-23 of Filliman. However, it is obvious that the feature "the discharging unit is coupled to a negative voltage so that electric charges are discharged from the light-emitting device to the negative voltage terminal" of claim 6 is not disclosed by Filliman since Filliman does not disclose, teach or suggest any subject matter such as "light-emitting device," "light-emitting device driving unit," or "discharging unit" or others. In addition, the circuit shown in FIG. 3 of

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Filliman can't be applied to the application or to be combined with Sekiya. Accordingly, Filliman is non-analogous to the application, and there is no motivation for combining Filliman and Sekiya.

Thus, Sekiya does not anticipate claims 1 and 12. The withdrawal of the rejection and the allowance of claim 1 are therefore earnestly solicited.

If independent claims 1 and 12 are allowable over the prior art of record, then their dependent claims 2-11 and 13-20 are allowable as a matter of law, at least because of the reason that these dependent claims contain all features/elements/steps of its respective independent claims 1 and 20.

Response to Claims Rejections under 35 USC § 103

Claim 11 is rejected under 35 USC §103(a) as being unpatentable over Sekiya in view of Hack. In addition, claims 6, 9 and 17 are rejected under 35 USC §103(a) as being unpatentable over Sekiya in view of Filliman.

For a proper rejection of a claim under 35 U.S.C. section 103, the cited combination of references must disclose, teach or suggest all elements/features/steps of the claim.

Independent claims 6, 9 and 17 are allowable for at least the reasons that Sekiya and Filliman, let alone or combined thereof, does not disclose, teach or suggest the feature "the

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discharging unit is coupled to a negative voltage so that electric charges are discharged from the light-emitting device to the negative voltage terminal” of claims 6, 9, and 17.

The Office Action states that claims 6, 9 and 17 is rejected by FIG. 3 and col. 6, lines 21-23 of Filliman. However, it is obvious that the feature highlighted above is not disclosed by Filliman since Filliman does not disclose, teach or suggest any subject matter such as “light-emitting device,” “light-emitting device driving unit,” or “discharging unit” or others. In addition, the circuit shown in FIG. 3 of Filliman can’t be applied to the application or to be combined with Sekiya. Accordingly, Filliman is non-analogous to the application, and there is no motivation for combining Filliman and Sekiya.

Thus, Sekiya and Filliman, let alone or combined thereof, does not anticipate claims 6, 9 and 17. The withdrawal of the rejection and the allowance of claims 6, 9 and 17 are therefore earnestly solicited.

Discuss to New Claims

It is noted that, the feature that “the discharging unit is coupled to a point for connecting the light-emitting device and the driving circuit” of new claims 21-23 is not disclosed, taught or suggested by Sekiya, Hack or Filliman. Referring to FIG. 3 of Sekiya, TFT3 is connected to the TFT2 but not connected to the light emitting element OLED directly.

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CONCLUSION

For at least the foregoing reasons, it is believed that all pending claims 1-20 and new claims 21-23 are in proper condition for allowance. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

Respectfully submitted,

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